

## Purchase Order Receipt Listing

Wednesday, September 27, 2017 10:43:20 AM

All amounts are calculated in domestic currency.

All Item ID/GL/WOS  
All Rec. Employees  
Grouped by Vendor ID  
All Currencies  
Receipt Dates from 9/26/20

| Order ID/<br>Line<br>Curr Type | Project ID<br>Nbr/<br>Insp<br>Req | Reference/<br>VendorID/                | PO U/M/<br>Description/<br>Cert Std | Stock U/M | Required Date<br>Required Qty | Recv<br>Date/<br>Qty<br>(PO U/M) | Recv<br>Qty<br>(PO U/M) | Cost Per Unit/<br>Recv Value | Inspected Qty/<br>Rejected Qty<br>(PO U/M) | MRB Qty/<br>MRB Reject<br>Qty | Book Amt |
|--------------------------------|-----------------------------------|--|-------------------------------------|-----------|-------------------------------|----------------------------------|-------------------------|------------------------------|--|-------------------------------|----------|
| PO37836                        | 2                                 | VC-CAM002                              | Acier Ouellette Inc.                |           |                               |                                  |                         |                              |  |                               |          |
| CAD                            | No                                | M4140H-R1.750                          | 4140 Round Bar                      | 1.750     | 10/6/2017                     | 9/26/2017                        | 2.0000                  | \$29.91                      | 0.0000                                     | 0                             | \$59.83  |
|                                |                                   | ml38616                                | MT-HRPO-S6GA                        | DAS       | 2.0000                        | PLOU01                           |                         | \$59.83                      | 0.0000                                     | 0                             |          |
| 3                              | No                                | Hot Rolled Pickled & Oiled Steel Sheet | sf                                  | DAS       | 5                             | 10/6/2017                        | 9/26/2017               | 50.0000                      | \$5.74                                     | 0.0000                        | 0        |
|                                |                                   | ml38616                                | 6GA                                 | DAS       | 9-89                          | 50.0000                          | PLOU01                  | \$287.17                     | 0.0000                                     | 0                             | \$287.17 |
| 4                              | No                                | M1018R2.250                            | f                                   | DAS       | 10/6/2017                     | 9/26/2017                        | 1.0000                  | \$13.69                      | 0.0000                                     | 0                             | \$13.69  |
|                                |                                   | ml38616                                | f                                   | DAS       | 5                             | 1.0000                           | PLOU01                  | \$13.69                      | 0.0000                                     | 0                             |          |
| 5                              | No                                | MT-HRS-P-0.375                         | sf                                  | DAS       | 10/6/2017                     | 9/26/2017                        | 16.0000                 | \$11.10                      | 0.0000                                     | 0                             | \$177.63 |
|                                |                                   | Hot Rolled Steel Plate 0.375" (44W)    | 36                                  | DAS       | 5                             | 16.0000                          | PLOU01                  | \$177.63                     | 0.0000                                     | 0                             |          |
| 6                              | No                                | ml38616                                | 9-89                                | DAS       | 9-89                          | 10/6/2017                        | 9/26/2017               | 1.0000                       | \$0.00                                     | 0.0000                        | 0        |
|                                |                                   | 71401-45                               | PROCUREMENT                         | DAS       | 5                             | 1.0000                           | PLOU01                  | \$0.00                       | 0.0000                                     | 0                             | \$0.00   |
|                                |                                   | QUALITY CLAUSES                        |                                     | DAS       | 9-89                          | 1.0000                           | PLOU01                  | \$0.00                       | 0.0000                                     | 0                             |          |
|                                |                                   | ml38616                                |                                     | DAS       | 9-89                          | 1.0000                           | PLOU01                  | \$0.00                       | 0.0000                                     | 0                             |          |

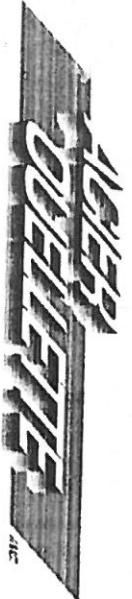
### Total Received Quantity:

Total Qty to Inspect (PO U/M):

### Total Reject Quantity:

Total Receipt Value:

### Total Balance Due Quantity:



**ACIER OUELLETTE INC.**

935, Boul. du Havre  
Salaberry-de-Valleyfield (Québec) J6S 5L1  
Tél.: 450-377-4248 Mtl: 514-336-4248 Ext.: 800-667-4248  
Fax: 450-377-5696 Mtl: 514-336-4246 Ext.: 866-456-4242

## Order - Sales

COPY C000052756

Customer N°  
CLI0001056

Date  
2017/09/22

Delivery date  
**2017/09/26**

### Billed to

DART AEROSPACE LTD

1270 , ABERDEEN ST.  
HAWKESBURY, Ontario, K6A 1K7

### Shipped to

, Ontario,

Att : CHANTAL LAVOIE Tél.: 613-632-5200

### Processed by

Salesman  
Josianne Bourdon

### Carrier

OUELLETTE VALLEYFIELD

### Credit Termes

Net 30 Days

Delivery Route  
**5**

Page  
**1**

| Product Description                       | Weight     | Qty | U/M | PCS NB |       |          | Internal Use Only |          |   |   |     |
|---|------------|-----|-----|--------|-------|----------|-------------------|----------|---|---|-----|
|   |            |     |     | CMD    | EXP   | B/O      | IN                | I        | S | C | OUT |
| 1 PLATE 44W 3/8 RANDOM<br>P44-38-V        | 4116       |     | DAS | 244.80 | 16.00 | PI2_SCLB | 1.00              |          |   |   |     |
| 1 X 4' X 4' COUPE AU FEU<br>FEU           | 3          |     | DAS | 5      | 9-89  |          | 245.00            | LBS_SCLB |   |   |     |
| 2 ROUND CR 2 1/4 1018 RANDOM<br>RCR-214-V | 5301       |     | DAS | 13.52  | 1.00  | PI_SCLB  | 1.00              |          |   |   |     |
| 1 X 12" COUPE A LA SCHE<br>SCIE           | 1          |     | DAS | 5      | 9-89  |          |                   |          |   |   |     |
| 3 PLATE HRPO 3/16 RANDOM NS<br>PPO-316-V  | 9029       |     | DAS | 383.00 | 50.00 | PI2_SCLB | 1.00              |          |   |   |     |
| 1 X 5' X 10' HEAT:<br>AC-9571-RY-25/09    | 93273C4-55 |     | DAS |        |       |          |                   |          |   |   |     |

NIR : R-109516-6


**ACIER OUELETTE INC.**
**Order - Sales**

COPY C000052756

935, Boul. du Havre  
Salaberry de Valleyfield (Québec) J6S 5L1  
Tél.: 450-377-4248 Mtl: 514-336-4248 Ext.: 800-667-4248  
Fax: 450-377-5696 Mtl: 514-336-4246 Ext.: 866-456-4242

Customer N° CL0001056  
Date 2017/09/22  
Delivery date 2017/09/26  
Your order N° 37836  
Processed by Josianne Bourdon

**Billed to**  
DART AEROSPACE LTD  
1270 , ABERDEEN ST.  
HAWKESBURY, Ontario, K6A 1K7

**Shipped to**  
, Ontario,  
Att : CHANTAL LAVOIE Tél.: 613-632-5200  
Carrier  
Credit Termes Net 30 Days  
Salesman  
OUELLETTE VALLEYFIELD

**Delivery Route** 5 **Page** 2

| Product Description   | Weight | Qty  | U/M     | PCS NB |     |     | Internal Use Only |   |   |   |     |
|---|--------|------|---------|--------|-----|-----|-------------------|---|---|---|-----|
|   |        |      |         | CMD    | EXP | B/O | IN                | I | S | C | OUT |
| 4 COLD DRAWN SEAM. TUBING 1" OD X .120 4130 N   |        |      |         | 1.00   | UN  |     | 1.00              |   |   |   |     |
| 1 X 20' HEAT: 217067 AC9573-MM-25/09  |        |      |         |        |     |     |                   |   |   |   |     |
| 5 ROUND 4140 HEAT TREAT 1 3/4 (20R) R4140-134H-20 4910 DAS                                | 16.36  | 2.00 | PI_SCLB | 1.00   |     |     |                   |   |   |   |     |
| 1 X 2' HEAT: 166509 5 COUPE A LA SCIE 9-89 SCIE 1 SURCHARGE ENERGETIQUE FRAIS_ENERGETIQUE | 1.00   | UN   |         |        |     |     |                   |   |   |   |     |
|   | \$     | 0.00 |         |        |     |     |                   |   |   |   |     |

Total Weight (LBS) : 657.66

NIR : R-109516-6

**Conditions :**  
All sold and delivered materials remain the property of "Acer Ouellette Inc" until payment is made in full, complete and cashed. All lost materials are at the buyer's expense. The warranty offered by "Acer Ouellette Inc." is the same as offered and honored by the manufacturer and his warranty is transferred by "Acer Ouellette Inc." to the client. The buyer hereby accepts to respect the following conditions: Net 30 days from billing date and the buyer agrees to pay administration charges of 2% per month (24% per annum) on all past due amounts over 30 days. Any default in respect with this contract will lead to payment by acceleration and norms to the seller, at his choice to claim for the balance due or the repossession of the goods sold. All claims must be made within five (5) days with this document enclosed. Any merchandise that has been damaged, cut or modified cannot be returned. All goods returned must be with our authorization and are subject to a 25% restocking charge.

|               |               |                |      |                      |   |   |   |
|---------------|---------------|----------------|------|----------------------|---|---|---|
| Prepared By : | Verified By : | Delivered By : | Time | Customer's Signature | Y | M | D |
|               |               |                |      |                      |   |   |   |

Total (\$CAD) 1 055.18  
Deposit 0.00  
Balance 1 055.18



**ESSAR STEEL ALGOMA INC., 105 West Street, Sault Ste. Marie, Ontario, Canada P6A 7B4**

|                                     |   |                                    |  |                       |                                  |
|-------------------------------------|---|------------------------------------|--|-----------------------|----------------------------------|
| SO No./Item & Date:                 | 8050589 000060 2017/03/12   | Shipment No. & Date:               | 1200008792 2017/03/12  | TC No., Date & Time:  | ESA-385275 2017/03/13 - 01:40:39 |
| Sold to Customer Name and Address : | LES ACIER TRANSBEC (1997) L'EE<br>BOUL LE CORBUSIER #201-4054<br>LAVAL, Quebec, Canada<br>H7L 5R2   | Ship to Customer Name and Address: | LES ACIER TRANSDEC (1997) L'EE<br>RUE JEAN COUTU 350<br>VARENNEES, Quebec, Canada<br>J3X 1P7 | Customer PO No./Item: | G-46220(REV) / 6                 |
| Customer Specification :            | HR STEEL STREET ISL A SQ. SS To the Chemistry of CSA G40.21 44W (2013) Top Semi Critical Surface Improved Shape Gauge type Min - 0/+ 0.0100 " | BOL No.:                           | 1200008792   | Cust. Part No.:       |                                  |
|                                     |   | Carrier:                           |  | C P RAIL (CAD FUND'S) | - CGXL 12060                     |

Supplementary Instructions : Test Cert 1 mrl@co1.bx.ca Test Cert 2: nathalie.legault@aciqtransbec.com

Insp TR : Test Report For Info Only

ESSAR STEEL ALGOMA INC. HEREBY CERTIFIES THAT THE MATERIAL HEREIN DESCRIBED WAS MADE AND TESTED IN ACCORDANCE WITH THE RULES OF THE SPECIFICATION SHOWN. ALL RESULTS ARE RETAINED IN ACCORDANCE WITH THE COMPANY'S STANDARD RECORD KEEPING PRACTICES. THIS MILI TEST REPORT MAY NOT BE REPRODUCED EXCEPT IN FULL WITHOUT WRITTEN APPROVAL OF ESSAR STEEL ALGOMA INC. IF YOU RECEIVE THIS DOCUMENT AND ARE NOT THE INTENDED RECEIVER, PLEASE CALL 705945-4556 FOR INSTRUCTIONS ON METHOD OF DISPOSAL OF DOCUMENT. THIS TEST REPORT HAS BEEN GENERATED BY A COMPUTERIZED SYSTEM AND IS VALID WITHOUT A PHYSICAL SIGNATURE.

MEETS EN 10204 3.1

ISO QUALITY AND ENVIRONMENTAL CERTIFICATES AVAILABLE AT WWW.ESSARSTEELALGOMA.COM

ALL HEATS FULLY ROLLED.

HEATS INDICATED WITH (\*) FINE GRAINED.  
HEATS INDICATED WITH (+) Made in Canada for NAFTA marking purposes.

| Dimensions (T x W x L)<br>0.3650" x 48.000" | Batch No.<br>XB#9191 | Heat No.-MS<br>7093CA-51 | Quantity<br>42.184 LB<br>1 | CHEMICAL PROPERTIES |       |      |      |      |            |              |          |          |       |
|---|----------------------|--------------------------|----------------------------|---------------------|-------|------|------|------|------------|--------------|----------|----------|-------|
|   |                      |                          |                            | C                   | Mn    | P    | S    | Si   | Cr         | Ni           | Mo       | Al       | Nb    |
| 7093CA <sup>+</sup>                         | 0.17                 | 0.87                     | 0.009                      | 0.004               | 0.030 | 0.02 | 0.02 | 0.03 | 0.02       | 0.03         | 0.040    | 0.017    | 0.099 |
| MECHANICAL PROPERTIES                       |                      |                          |                            |                     |       |      |      |      |            |              |          |          |       |
| Heat No.                                    | Batch No.            | SRCE                     | LAB                        | GAUGE               | COND  | METH | DIR  | LOC  | YIELD(KSI) | TENSILE(KSI) | EL SCALE | ELONG(%) |       |
| 7093CA                                      | DSPC ALG             | 0.3650                   | AR                         | .2                  | I     | F    | 56.0 | 76.0 | 2*         | 42           |          |          |       |

DAS  
5  
9-89

*Concise*

KASHIF REHMAN  
MANAGER METALLURGICAL SERVICES

"WARNING" THE TEST RESULTS AND VALUES REPORTED HEREIN INDICATE ONLY THAT (1) THE PARTICULAR STEEL FOR WHICH THIS CERTIFICATE IS ISSUED MEETS THE MINIMUM SPECIFIED YIELD STRENGTH AND (2) THE ANALYSIS AND PHYSICAL PROPERTIES OF EACH STEEL ARE IN CONFORMANCE WITH THE REQUIREMENTS OF THE SPECIFICATION INDICATED. THE RESULTS OR VALUES REPORTED HEREIN CAN NOT BE USED TO CLASIFY THE STEEL FOR ANY SPECIFICATION OTHER THAN THE ONE INDICATED AND CAN NOT BE RELIED UPON FOR ANY PURPOSE, INCLUDING DESIGN OR CALCULATIONS, AS REPRESENTING THE ACTUAL STRENGTH OF SUCH STEEL.

Date:2017/03/16 Time:13:20:53 Page no:1 of 1



CERTIFICADO DE CALIDAD/QUALITY REPORT

ARANAY LUPARDO, 2  
9468490 UGADO-MIRAVILES/VIZCAYA (SPAIN)  
Tels.: 94680211  
Fax: 94680128  
e-mail: calibraospmedem.es

**SCALIBRADOS** **PRADEIRA, S.A.**

67005 ANGUS STOLANI  
67005 ANGUS STOLANI

: UNION

*High-strength products. Technical delivery conditions.*

10

| Mechanical properties |                |                |    |       |       |       |
|-----------------------|----------------|----------------|----|-------|-------|-------|
| %                     | M <sub>b</sub> | M <sub>p</sub> | %  | C     | 0.013 | 0.022 |
| 63.50                 | 915850         | 40570          | 15 | 0.160 | 0.080 | 0.030 |
| 76.20                 | 915720         | 40224          | 15 | 0.170 | 0.013 | 0.020 |
| 88.90                 | 915641         | 39884          | 15 | 0.170 | 0.010 | 0.003 |
| 91.91                 | 135756         | 40309          | 15 | 0.160 | 0.710 | 0.016 |

#### **Cárcacterísticas mecánicas / Mechanical properties**

Observaciones: BARRAS DE ACERO ESTIRADAS /

| DESCRIPTION | DEFINITION |
|-------------|------------|
| Case        | OF         |
| EN 10277-1  |            |
|             |            |

| Description | Descripcion |
|-------------|-------------|
|             |             |
|             |             |
|             |             |



Fechada: 11/11/2016

Firmada: Susana Frumadez

D

C

A

B

C

D

E

F

G

H

I

J

K

L

M

N

O

P

Q

R

S

T

U

V

W

X

Y

Z

DEPARTAMENTO DE CALIDAD: Certifico que el mencionado producto cumple con las especificaciones del pedido.

QUALITY DEPARTMENT: Certify that the product mentioned complies with the order specifications.

Norma : EN 10277 Products Calibrados de acero. Condiciones técnicas de suministro.

Norma : EN 10277 Products Calibrados de acero. Condiciones técnicas de suministro.

DEPARTAMENTO DE CALIDAD / CERTIFICATE NR. 41806

ALBARAN 44806 CLIENTE LBS ACCERS TRANSBEC (1997) LTBE CUSTOMER

Detailed Note Nr. 3.1

De acuerdo a/Wie die accordanze

EN 10204/DIN 50049 3.1

CERTIFICADO DE CALIDAD/QUALITY REPORT

ABANAY LUPARDO, 2 48490 UGAO-MRAVALLES/VIZCAYA (SPAIN)

Tel.: 946480211 Fax: 946480128 Email: calpradeza@calibradospradeza.es

www.calibradospradeza.es



| SO No., Item & Date:  | 8053475 000070 2017/06/04 | Shipment No. & Date: | 1000243071 2017/06/04            | TC No., Date & Time :          | ESA-405867 2017/06/04 - 13:22:12 |      |      |      |       |       |       |        |       |         |
|---|---------------------------|----------------------|----------------------------------|--------------------------------|----------------------------------|------|------|------|-------|-------|-------|--------|-------|---------|
|   |                           |                      | Customer PO No./Item: 791356 / 7 |                                |                                  |      |      |      |       |       |       |        |       |         |
|   |                           |                      | BOL No.: FB075374                | Cust. Part No.:                |                                  |      |      |      |       |       |       |        |       |         |
|   |                           |                      | Carrier:                         | TRANSCARE LOGISTIC CORP. - 638 |                                  |      |      |      |       |       |       |        |       |         |
| Customer Specification : HR STEEL SHEET Carbon CQ / CSA/ASTM A1011 CS/TY B (2015) Top Semi Critical Surface Improved Shape Pickled Oiled Gauge type MIN - 0/+ 0.0060 " Coil break considered  |                           |                      |                                  |                                |                                  |      |      |      |       |       |       |        |       |         |
| Supplementary Instructions : Test Cert 1:nancy.duni@ryerson.com   |                           |                      |                                  |                                |                                  |      |      |      |       |       |       |        |       |         |
| Insp T/R :  | Chemical Analysis         |                      |                                  |                                |                                  |      |      |      |       |       |       |        |       |         |
| <p>ESSAR STEEL ALGOMA INC. HEREBY CERTIFIES THAT THE MATERIAL HEREIN DESCRIBED WAS MADE AND TESTED IN ACCORDANCE WITH THE RULES OF THE SPECIFICATION SHOWN. ALL RESULTS ARE RETAINED IN ACCORDANCE WITH THE COMPANY'S STANDARD RECORD KEEPING PRACTICES. THIS MILL TEST REPORT MAY NOT BE REPRODUCED EXCEPT IN FULL WITHOUT WRITTEN APPROVAL OF ESSAR STEEL ALGOMA INC. IF YOU RECEIVE THIS DOCUMENT AND ARE NOT THE INTENDED RECEIVER, PLEASE CALL (705)945-4095 FOR INSTRUCTIONS ON METHOD OF DISPOSAL OF DOCUMENT. THIS TEST REPORT HAS BEEN GENERATED BY A COMPUTERIZED SYSTEM AND IS VALID WITHOUT A PHYSICAL SIGNATURE.</p> <p>MEETS EN 10204 3.1</p> <p>ISO QUALITY AND ENVIRONMENTAL CERTIFICATES AVAILABLE AT <a href="http://www.essarsteel.algoma.com">www.essarsteel.algoma.com</a></p> <p>ALL HEATS FULLY KILLED.</p> <p>HEATS INDICATED WITH (*) FINE GRAINED.</p> <p>HEATS INDICATED WITH (+) MADE IN CANADA FOR NAFTA PREFERENCE AND NAFTA MARKING PURPOSES</p> |                           |                      |                                  |                                |                                  |      |      |      |       |       |       |        |       |         |
| Dimensions (T x W x L)  |                           | Batch No.            | Heat No MS                       | Quantity                       | Pcs                              |      |      |      |       |       |       |        |       |         |
| 0.1770 " x 60.000 "   |                           | PBO7006              | 9373C4-55                        | 53,550 LB                      | 1                                |      |      |      |       |       |       |        |       |         |
| CHEMICAL PROPERTIES .....   |                           |                      |                                  |                                |                                  |      |      |      |       |       |       |        |       |         |
| Heat No. (WPS)  | C                         | Mn                   | P                                | S                              | Si                               | Cr   | Ni   | Mo   | Al    | Nb    | V     | B      | Tl    | N       |
| 9373C4+   | 0.04                      | 0.27                 | 0.008                            | 0.003                          | 0.020                            | 0.01 | 0.01 | 0.00 | 0.023 | 0.000 | 0.000 | 0.0000 | 0.001 | 0.00060 |

**\*\*WARNING\*\*** THE TEST RESULTS AND VALUES REPORTED HEREIN INDICATE ONLY THAT (1) THE PARTICULAR STEEL FOR WHICH THIS CERTIFICATE IS ISSUED MEETS THE AMERICAN SPECIFIED YIELD STRENGTH AND (2) THE ANALYSIS AND PHYSICAL PROPERTIES OF SUCH STEEL ARE IN CONFORMANCE WITH THE REQUIREMENTS OF THE SPECIFICATION INDICATED. THE RESULTS OR VALUES REPORTED HEREIN CAN NOT BE USED TO QUALIFY THE STEEL FOR ANY SPECIFICATION OTHER THAN THE ONE INDICATED AND CAN NOT BE RELIED UPON FOR ANY PURPOSE (INCLUDING DESIGN OR CALCULATION) AS REPRESENTING THE ACTUAL STRENGTH OF SUCH STEEL.

KASHIF REHMAN

MANAGER METALLURGICAL SERVICES

BENTELER ▲

Steel/Tube

MK#-126385 Item-CDS 1.000 .120 .760 4130 Heat #-217067

Benteler SteelTube GmbH  
Postfach 13 40  
33043 Paderborn  
Deutschland  
Tel.: +49-5254-810 Fax: +49-5254-13666

# BENTELER ▼

Steel/Tube

**ABNAHMEPRÜFZEUGNIS EN 10204-3.1**  
INSPECTION CERTIFICATE EN 10204-3.1  
CERTIFICAT DE RECEPTION EN 10204-3.1

Dokument-Nr.: 41-717496/001/P  
Document No.: No. du document:

Blatt: 2 / 4  
Page: Page:

| Pos. | Stück | Maße                 | Dimensions | Länge    | Gewicht | Schmelzen-Nr. | Prüfdruck          | Rohr-Nr.-Gruppe        | Vielfachhängen      |
|------|-------|----------------------|------------|----------|---------|---------------|--------------------|------------------------|---------------------|
|      | Item  | Number               | Dimensions | Length   | Weight  | Heat No.      | Test pressure      | Tube number group      | Multiple lengths    |
|      | Poste | Nombre               | Dimensions | Longueur | Poids   | No de coulée  | Pression d'épreuve | Série du no. des tubes | Longueurs multiples |
| 0016 | 161   | 1.000" O.D. * 0.120" | feet       | 3169,29  | 3576    | 217067        |                    |                        |                     |
|      |       | 17 FT - 24 FT        |            |          |         |               |                    |                        |                     |

Schmelzenanalyse [%] / Heat analysis [%] / Analyse sur coulée [%]

| Pos.  | Schmelzen-Nr. | C | Si | Mn | P | S | Cr | Mo | Ni | Cu |
|-------|---------------|---|----|----|---|---|----|----|----|----|
| Item  | Heat No.      | C | Si | Mn | P | S | Cr | Mo | Ni | Cu |
| Poste | No. de coulée |   |    |    |   |   |    |    |    |    |

0016 217067 0,315 0,250 0,54 0,007 0,003 0,89 0,19 0,09 0,11

Produktanalyse [%] / Product analysis [%] / Analyse sur produit [%]

| Pos.  | Schmelzen-Nr. | C | Si | Mn | P | S | Cr | Mo | Ni | Cu |
|-------|---------------|---|----|----|---|---|----|----|----|----|
| Item  | Heat No.      | C | Si | Mn | P | S | Cr | Mo | Ni | Cu |
| Poste | No. de coulée |   |    |    |   |   |    |    |    |    |

0016 217067 0,310 0,250 0,52 0,007 0,003 0,88 0,19 0,07 0,10

Prüfergebnisse / Test results / Résultats des essais

| Die Rohre wurden zerstörungsfrei geprüft:<br>The tubes are non destructive tested:<br>Les tubes ont passé un essai non destructif: | ET-test: acc. to ASTM-A 450; ET - Test method: acc. to ASTM-E 309; for imperfections:<br>ET-test: ET with rotating pancake coils; according to EN 10246-3; imperfections:<br>Notch depth: 0,30 mm; notch width < = notch depth; notch length min. 2 x transducer<br>width (max. 50 mm) | PASSED | Maßkontrolle:<br>Dimensions examination:<br>Vérification des dimensions: |
|--|--|--------|--|
| Augensichtskontrolle:<br>Visuel inspection:<br>Examen visuel:  |  | PASSED | PASSED   |

PASSED

Ergebnisse der mechanischen Prüfung / Results of mechanical testing / Résultats des essais mécaniques

| Die Probennahme erfolgte an Vielfachhängen.<br>This sampling was carried out on multiple lengths.<br>L'echantillonage était réalisée aux longueurs multiples. | PASSED |
|---|--------|
|   | PASSED |

PASSED



Benteler Steel/Tube GmbH  
Postfach 13 40  
33043 Paderborn  
Deutschland  
Tel.: +49.5254.81-0 Fax: +49.5254.13666

# BENTELER ▽

Steel/Tube

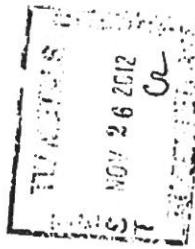
ABNAHMEPRÜFZEUGNIS EN 10204-3.1  
INSPECTION CERTIFICATE EN 10204-3.1  
CERTIFICAT DE RECEPTION EN 10204-3.1

Dokument-Nr.: 41.717496/001/P

Document No.:  
No. du document:

Blatt: 4 / 4  
Page:  
Page:

Prüf-Nr.:  
Inspection No.:  
No. du certificat:



Paderborn Schloß Neuhaus, 05.10.2012. TEL.: 05254.81-1768 FAX: 05254.81-1752

Abnahmbeauftragter  
Inspection représentative  
Contrôleur

Es wird bestätigt, daß die gelieferten Erzeugnisse den techn. Lieferbedingungen des Auftrages entsprechen. Dieses Dokument wurde mittels EDV erstellt und ist ohne Unterschiff rechtskräftig.  
We certify that the supplied products comply with the order specification. This document was prepared by means of electronic data processing and is valid without signature.  
Nous attestons que les produits livrés sont conformes aux stipulations de la commande. Ce document a été établi par traitement électronique et est valide sans signature.

f-

Benteler Steel/Tube GmbH  
 Residenzstraße 1  
 33104 Paderborn  
 Germany  
 Tel. 49.5254.81-0 Fax: 49.5254.13656



**Abnahmeprüfzeugnis EN 10204-3.1 / Anhang  
 Inspection Certificate EN 10204-3.1 / appendix  
 Certificat de réception EN 10204-3.1 / appendice**

Dokument-Nr.: 41-717496/001/P  
 Document No.: 41-717496/001/P  
 No. de document:

Blatt: von  
 Page: 1 of 1  
 Page: de

Halbzeuguntersuchung: Stahlsorte 4130 / Semi finished product examination: grade 4130 / Produit semi-fin: nuance 4130

| Schmelzen-Nr.<br>Heat No.<br>Coulée No. | Position<br>Item<br>Poste | Korngröße<br>Grain size<br>Grosseur de grain<br>(ASTM-E 112) | Härtbarkeit (min. Anforderungen)<br>Hardenability (min. requirements)<br>Tremperabilité (exigence min.)<br>(ASTM-A 255) | Magnetpulverprüfung<br>Magnetic particle inspection<br>Essai à la poudre magnétique<br>(AMS 2301G / 2640J) | Macrostruktur (test<br>Macrostructure (test<br>Essai de macrostructure<br>(ASTM-E 381)) |
|---|---------------------------|--|---|--|---|
|   |                           | min. 5   | J(5/16")<br>min. .35 HRC  | J(8/16")<br>min. 28 HRC  | F max. 0.34<br>S max. 0.25<br>max. S 2<br>max. R 1<br>max. C 2                          |
| 217067                                  | 016                       | 10   | 39  | 31   | 0.039<br>0.024<br>S 2<br>R 1<br>C 2   |

Decarburization Depth  
 Outside 0.050 mm Inside 0.030 mm

Der Stahl ist frei von Quecksilberverunreinigungen. / The steel is free of mercury contamination. / L'acier est libre des contaminations de mercure

Paderborn Schloß Neuhaus, 05.10.2012  
 Tel.: (0)5254 81-1992 Fax: (0)5254 81-1991

**BENTELER**  
 Steel/Tube GmbH  
 Abnahmbeauftragter  
 Inspection representative  
 Contrôleur

Thomas Gollan

# Eaton Steel Bar Company Inspection Certificate 1601418

EN 10204:2004-3.1

|              | BOI                        | Ship Date                    | Customer PO   | Item              | Customer Item                               | Item Description  |
|--------------|----------------------------|------------------------------|---------------|-------------------|---|---|
| 201063       | 27-Oct-2016                | B96887                       | 11132 rev 004 | V016262           | 1-34 H.R. RD 4140/422MM 24H SBQ QTSF FG MST | All bundles listed below were produced using steel from Heat 166509 Issued by ALTON STEEL and were completed from Eaton Steel Job 799389. |
| C            | Description                | Value                        | Units         | Heat Treating     | Description                                 | Value   |
|              | Carbon                     | 0.41000                      | PWT           | TEMPER TEMP F     | Temper Temp in Fahrenheit                   | 500 - 2500  |
| Mn           | Kanganese                  | 0.89000                      | PWT           | AUSTEN TEMP F     | Austenitize Temp in Fahrenheit              | 1600 - 1700   |
| P            | Phosphorous                | 0.01400                      | PWT           | SR TEMP F         | Stress Relief Temp in Fahrenheit            | 500 - 2500  |
| S            | Sulfur                     | 0.02200                      | PWT           | MAGNETISM-HIT     | Magnetism in Gauss                          | 0 - 20  |
| Si           | Silicon                    | 0.23000                      | PWT           | TIME AT TEMP      | Time at Temperature                         | Report  |
| Cr           | Nickel                     | 0.10900                      | PWT           | QUENCH MEDIA      | Quench Media Requirements                   | P&O   |
| Mo           | Chromium                   | 0.84600                      | PWT           | STRESS FREE       | Cert stress free                            | CERTIFIED   |
| Al           | Holypdeium                 | 0.02000                      | PWT           | QUENCH & TEMPER   | Quench & Temper                             | CONFORMS  |
| Cu           | Aluminum                   | 0.00100                      | PWT           | HEAT PROCESSING   | Heat Processing                             | Value   |
| V            | Copper                     | 0.23000                      | PWT           | HEAT COUNTRY      | Heated in Country                           | USA   |
| Cb           | Vanadium                   | 0.02800                      | PWT           | ROLLED COUNTRY    | Rolled in Country                           | USA   |
| N            | Columbium                  | 0.00200                      | PWT           | RED RATIO         | Reduction Ratio                             | 20 - 37   |
|              | Nitrogen                   | 0.01000                      | PWT           | ASTM Standard     | Description                                 | KED   |
| P+S          | Element Sum Limit          | 0.03600                      | PWT           | ASTM A34-A34-N-C1 | Grade N-C1                                  | Conforms  |
| D1           | Ideal Diameter             | 4.97000                      | IN            | A34-A34-N-C1      | ASTMA BC Tensile and Yield properties       | Value   |
| Cleanliness  | Description                | Value                        | Units         | STRUCTURE         | STRUCTURE                                   | Value   |
| NACRO        | Report macro etch results. | -                            | -             | PERCENT TM        | Percent Tempered Martensite                 | 80 - 100  |
| ETCH         | Description                | Value                        | Units         | MICROSTRUCTURE    | Reported Microstructure                     | PCT   |
| Geometry     | Diameter                   | 1.7344 - 1.7656              | IN            | Tag Number        | QTY   | %   |
| DIAETER      | Description                | Value                        | Units         | 022-073938        | 4155 LBS                                    | Length  |
| Joining      | J1                         | 1/16 inch from Quenched End  | 56            |                   |   | 12ft3in/24feet:   |
|              | J2                         | 2/16 inch from Quenched End  | 56            |                   |   |   |
|              | J3                         | 3/16 inch from Quenched End  | 56            |                   |   |   |
|              | J4                         | 4/16 inch from Quenched End  | 56            |                   |   |   |
|              | J5                         | 5/16 inch from Quenched End  | 56            |                   |   |   |
|              | J6                         | 6/16 inch from Quenched End  | 55            |                   |   |   |
|              | J7                         | 7/16 inch from Quenched End  | 54            |                   |   |   |
|              | J8                         | 8/16 inch from Quenched End  | 52            |                   |   |   |
|              | J9                         | 9/16 inch from Quenched End  | 52            |                   |   |   |
|              | J10                        | 10/16 inch from Quenched End | 50            |                   |   |   |
|              | J11                        | 11/16 inch from Quenched End | 50            |                   |   |   |
|              | J12                        | 12/16 inch from Quenched End | 50            |                   |   |   |
|              | J13                        | 13/16 inch from Quenched End | 49            |                   |   |   |
|              | J14                        | 14/16 inch from Quenched End | 47            |                   |   |   |
|              | J15                        | 15/16 inch from Quenched End | 45            |                   |   |   |
|              | J16                        | 16/16 inch from Quenched End | 43            |                   |   |   |
|              | J17                        | 17/16 inch from Quenched End | 42            |                   |   |   |
|              | J18                        | 18/16 inch from Quenched End | 42            |                   |   |   |
|              | J19                        | 19/16 inch from Quenched End | 41            |                   |   |   |
|              | J20                        | 20/16 inch from Quenched End | 41            |                   |   |   |
|              | J21                        | 21/16 inch from Quenched End | 40            |                   |   |   |
|              | J22                        | 22/16 inch from Quenched End | 40            |                   |   |   |
|              | J23                        | 23/16 inch from Quenched End | 39            |                   |   |   |
|              | J24                        | 24/16 inch from Quenched End | 37            |                   |   |   |
|              | J25                        | 25/16 inch from Quenched End | 35            |                   |   |   |
|              | J26                        | 26/16 inch from Quenched End | 32.0          |                   |   |   |
| Mechanical   | Description                | Value                        | Units         |                   |   |   |
| TENSILE PSI  | Tensile Strength in Psi    | 55,000                       | PSI           |                   |   |   |
| YIELD PSI    | Yield Strength in Psi      | 33,830.00                    | PSI           |                   |   |   |
| ELONGATION   | Percent Elongation         | 15.00                        | PC%           |                   |   |   |
| REDUCTION    | Percent Reduction in Area  | 55.0                         | PC%           |                   |   |   |
| BRINELL SURF | Brinell Surface            | 322.0                        | BRN           |                   |   |   |

Bundle tags with Eaton Steel identifiers reference the steel grade, heat, purchase order number, part number, product description and weight. Tested and certified in accordance with Eaton Steel's Quality Manual OM-C0001 / Rev 3 / 2/26/13.

We hereby certify the above to be in conformance, and a true copy of data represented in company records. This steel was not subject to weld repair or exposed to mercury while in the possession of Eaton Steel.  
Created on 27-Oct-2016  
Thomas Snabes, Corporate Metallurgist

This document was prepared by means of electronic data processing and is valid without signature.  
10221 Capital Avenue, Oak Park, IL 60307 USA  
<http://www.eatonsteel.com>

Tel: 248-336-3434  
Fax: 248-338-1424



## CERTIFIED MILL TEST REPORT

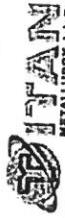
Alton Steel Test Lab  
45 Cal Street  
Alton, IL 62002-2711  
(618) 463-4420, FAX 2-2485  
(618) 463-4491 (fax)

| BILL TO  |   | SHIP TO  |           |              |               |             |
|--|---|--|-----------|--------------|---------------|-------------|
| Eaton Steel Corporation<br>1021 Capital Avenue<br>Canton Park, MI 49221  |   | Eaton Steel Corporation<br>c/o Apollo Steel Trust<br>10120 Chicago Street<br>Canton Park, MI 49231 |           |              |               |             |
| Date   | 04/16/2015  | Customer PO  | 155512-M5 |              |               |             |
| ASTM No.   | ASTM A 312 Item   | Customer #   | 10902     |              |               |             |
| Item Description<br>Semi-Sol. Lst. Grade 12,700, 14x 2"  |   |  |           |              |               |             |
| Heat Number  |   |  |           |              |               |             |
| CHEMICAL ANALYSIS TEST METHODS ASTM E-415 & E-1019   |   |  |           |              |               |             |
| 20% TENSILE HARDSHIPS/TESTING ASTM A-355 CALCULATED FROM CHEMICAL DATA   |   |  |           |              |               |             |
| SPECIAL TEST RESULTS   |   |  |           |              |               |             |
| ASTM E-415 Method A   ASTM E-415 Method C   540-2412   ASTM E-341   Ducty   Impact   |   |  |           |              |               |             |
| Heat No. / Lot No.   | Tensile Strength (T.S.)   | Yield Point (Y.P.)   | Temper    | % Elongation | Impact R.O.A. | Impact Test |
| 164539   | 0.41 0.59 0.014 0.022 0.23 0.23 0.103 0.946 0.162 0.010 0.201 0.023 0.018 0.0023 0.0027 0.0100 0.0001 |  |           |              |               |             |
| 5  | 7 4.97  | 56 55 56 55 56 55 54 53 51 50 47 45 43 42 41 40 37 35  |           |              |               |             |
| ADDITIONAL COMMENTS  |   |  |           |              |               |             |
| No property, health, safety, or environmental hazard or<br>incompatibility is listed or otherwise stated in the declaration of no<br>hazard. No tests or analyses were performed on this material.<br>This Sheet is 100% Electro Arc Furnace Material and is Recycled in the<br>U.S.A. Manufactured/Quarried by ALTON STEEL INC. |   |  |           |              |               |             |
| SOMETHING ELSE TO BE NOTED: None   |   |  |           |              |               |             |
| The County of Madison, State of Illinois   |   |  |           |              |               |             |
| Date _____   |   |  |           |              |               |             |
| By: _____  |   |  |           |              |               |             |

DAS  
9-89

ADDITIONAL INFORMATION: The test results described in this report  
are based on samples supplied by a representative of  
Alton Steel Incorporated.  
I hereby certify that the above tests are deemed as performed  
in the interest of ALTON STEEL INCORPORATED  
Quality Control: JES/JS/LOL

(4/20/2015)

**Lab Services Report**

METALLURGY, LLC.

10221 Capital Avenue  
Oak Park MI 48237  
(248)343-3578 telephone  
(248)348-1434 facsimile

Bill To:

Apollo Heat Treating  
10400 Capital Avenue  
Oak Park, MI

Attn:

Randy Call

rca1@apollohtp.com

Ship To:

Apollo Heat Treating  
10400 Capital Avenue  
Oak Park, MI

Report Date:

10/14/2016

Report ID:

16-3002

Request ID:

This report contains results for the indicated services performed on the following material(s):

| Part No.        | 11132 QTST | Finish              | HR       | Shape      | Round  |
|-----------------|------------|---------------------|----------|------------|--------|
| Size            | 1-3/4      | Grade               | 4140     | Work Order | 799489 |
| Titan Sample ID | Heat       | Custom of Sample ID |          |            |        |
| 16-3002-1       | 1000000    | WD 755489           | Job 2/57 |            |        |

*Steve Avery*

Report Approved By: Steve Avery

Mechanical Testing

ASTM E11-15

ASTM E8M-15a

Mechanical Testing

ASTM E10-15

| Sample ID | Ultimate Tensile Strength, psi | 0.2% Offset Yield, psi | Elongation at Break, % | Reduction of Area, % | HBW Surface |
|-----------|--------------------------------|------------------------|------------------------|----------------------|-------------|
| 16-3002-1 | 151,300                        | 138,300                | 19                     | 55                   | 321         |

Test Comments

Mechanical tested at Mid Radius

Any services with a section marked with \* are not part of Titan Metallurgy's current A2LA accreditation.  
All testing performed by Titan Metallurgy was done at ambient (room) temperature.

Report ID: 16-3002  
Page 1 of 2

Any sources within a section marked with \* are not part of Tian Metallurgy's current A2LA accreditation.  
All testing performed by Tian Metallurgy was done at 30°C (room) temperature

Report ID:16-2002  
Page 2 of 2



Heat Treating & Processing Company, L.L.C.

10400 Capital Avenue • Oak Park, Michigan 48237 • (248) 398-3134

#### CERTIFICATION OF HEAT TREATMENT

Date: 10 / 17 / 2016

Certification Number: 16 - 0467

Customer Order Number: 799489

Part Number: 10902 - 11132

Heat Number: 166509

Heat Treat Job Number: 2167

Material: 4140

Quantity: 206 Pcs.

Weight: 41,080 Lbs.

Description: 1.7500" Diameter x 24' 2" Length  
Per Specification: ESHT HT14140 - 42QT

|                         | Temperature         | Time at Heat      | Coolant               |
|-------------------------|---------------------|-------------------|-----------------------|
| Normalized              | N/A                 |                   |                       |
| Preheat                 | N/A                 |                   |                       |
| Austenitizes/Hardenized | 1600 °F             | 45 Minutes        |                       |
| Spray Quenched          | 102.8 °F - 104.8 °F | N/A               | Water                 |
| Temper                  | 1220 °F             | 1 Hour 15 Minutes | Air Cooled to Ambient |
| Temper                  | N/A                 |                   |                       |

Method of heat treat monitor, set point thermocouple (Type K). Equipment calibrated per AMS2750E.

We hereby certify the above material has been treated in the manner described and are correct as contained in the records of Apollo Heat Treating and Processing, LLC.

Randy L. Call  
Plant Manager  
Apollo Heat Treating & Processing, LLC

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

|                  |                                   |
|------------------|-----------------------------------|
| OC 18 INSPECTION | ENGINEERING SIGNOFF (if required) |
| SIGNED OFF BY:   | <i>RJD</i>                        |
| DATE:            | SEP 27 2017                       |

|   |                              |     |       |       |         |
|---|------------------------------|-----|-------|-------|---------|
| CUT SAMPLE PIECE OF MATERIAL AND FORM A HARDNESS CHECK. |                              |     |       |       |         |
| RECORD RESULTS BELOW                                    |                              |     |       |       |         |
| TYPE OF MATERIAL  | HRC                          | HRB | DUR A | DUR D | WEBSTER |
|   | SIZE OF TEST SAMPLE          |     |       |       |         |
|   | HARDNESS / DUROMETER READING |     |       |       |         |
|   |                              |     |       |       |         |
|   |                              |     |       |       |         |

*testers located in the Quality Office*

| DESCRIPTION                                     | NCR<br>(Check<br>Y/N) | COMMENTS |
|---|-----------------------|----------|
| SURFACE DAMAGE                                  | Y (N)                 |          |
| CORROSION                                       | Y (N)                 |          |
| CORRECT FINISH                                  | Y (N)                 |          |
| CORRECT GRAIN DIRECTION                         | Y (N)                 |          |
| CORRECT MATERIAL PER M-DRAWING                  | Y (N)                 |          |
| PHOTO REQUIRED                                  | Y (N)                 |          |
| CORRECT THICKNESS                               | Y (N)                 |          |
| CORRECT MATERIAL IDENTIFICATION                 | Y (N)                 |          |
| CORRECT M# ON THE MATERIAL                      | Y (N)                 |          |
| DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF | Y (N)                 |          |
| DOES THIS REQUIRE AN EXTRUSION REPORT           | Y (N)                 |          |
| <i>44# 4093 C4-51</i>                           |                       |          |

|                      |                       |
|----------------------|-----------------------|
| MATERIAL CERT REC'D: | <i>44# 4093 C4-51</i> |
| PO / BATCH NO.:      | <i>0037836/M13866</i> |
| DATE:                | <i>SEP 27 2017</i>    |
| QUANTITY RECEIVED:   | <i>16 Sqs ft</i>      |
| QUANTITY INSPECTED:  | <i>16 Sqs ft</i>      |
| QUANTITY REJECTED:   | <i>16 Sqs ft</i>      |
| SHEET SIZE ORDERED:  | <i>.375</i>           |
| THICKNESS RECEIVED:  | <i>.366</i>           |
| MATERIAL CERT REC'D: | <i>44# 4093 C4-51</i> |
| THICKNESS ORDERED:   | <i>.375</i>           |
| SHEET SIZE RECEIVED: | <i>.366</i>           |
| QUANTITY RECEIVED:   | <i>16 Sqs ft</i>      |
| QUANTITY INSPECTED:  | <i>16 Sqs ft</i>      |
| QUANTITY REJECTED:   | <i>16 Sqs ft</i>      |

## MATERIAL RECEIPT INSPECTION FORM

## SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL:

SPECIFICATION:

ASTM A36 OR ASTM A1011 OR 44W OR ASTM A1018

PART NUMBER:

MT-HRS-P-[L.LLL]x[W.WWW]x[T.TTT]

WHERE LLLL IS PLATE LENGTH IN INCHES

WHERE W.WWW IS PLATE WIDTH IN INCHES

WHERE H.HHH IS PLATE THICKNESS IN INCHES

MT-HRS-P-24.000x24.000x0.750

TOLERANCES PER MANUFACTURER SPECIFICATIONS

| REV. | DESCRIPTION | DATE       | BY  | APPROVED |
|------|-------------|------------|-----|----------|
| A    | NEW ISSUE   | 2017.09.15 | SAC | WM       |


**DART**  
AEROSPACE  
 Kitchener, Ontario, Canada

**HOT ROLLED STEEL PLATE**

**MT-HRS-P**

**REV. A**

**SCALE: NTS WEIGHT: N/A LBS. SHEET 1 OF 1**

THE DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS NOT TO BE COPIED OR DISCLOSED WITHOUT THE WRITTEN PERMISSION OF DART AEROSPACE LTD. UNLESS APPROVED FOR RELEASE ON CONTRACTUAL BASIS, THIS DOCUMENT IS NOT TO BE USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH IT WAS PROVIDED.

1 2 3 4 5 6 7 8 C-E-N 17.657

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

|                   |                                   |
|-------------------|-----------------------------------|
| QC 18 INSPECTION  | ENGINEERING SIGNOFF (if required) |
| INSPECTED BY:     | SIGNS OFF BY:                     |
| DATE: SEP 27 2017 | DATE: 9-29                        |

|  |                              |     |       |       |         |
|--|------------------------------|-----|-------|-------|---------|
| CUT SAMPLE PIECE OF MATERIAL AND PREFERM A HARDNESS CHECK. |                              |     |       |       |         |
| RECORD RESULTS BELOW                                       |                              |     |       |       |         |
| TYPE OF MATERIAL   | HRC                          | HRB | DUR A | DUR D | WEBSTER |
|  | SIZE OF TEST SAMPLE          |     |       |       |         |
|  | HARDNESS / DUROMETER READING |     |       |       |         |
|  |                              |     |       |       |         |

Testers located in the Quality Office

| DESCRIPTION                           | NCR<br>(Check<br>Y/N) | COMMENTS   |
|---------------------------------------|-----------------------|------------|
| SURFACE DAMAGE                        | Y (N)                 |            |
| CORROSION                             | Y (N)                 |            |
| CORRECT GRAIN DIRECTION               | Y (N)                 |            |
| CORRECT MATERIAL PER M-DRAWING        | Y (N)                 |            |
| PHOTO REQUIRED                        | Y (N)                 |            |
| CORRECT REF # TO LINK CERT            | Y (N)                 | 14# 166509 |
| CORRECT MATERI AL IDENTIFICATION      | Y (N)                 |            |
| CORRECT M# ON THE MATERIAL            | Y (N)                 |            |
| DOES THIS MATERIAL REQUIRE            | Y (N)                 |            |
| ENGINEERING SIGN OFF                  | Y (N)                 |            |
| DOES THIS MATERIAL READING            | Y (N)                 |            |
| TESTERS LOCATED IN THE QUALITY OFFICE | Y (N)                 |            |
| EXTENSION REPORT                      | Y (N)                 |            |

MATERIAL CERT REC'D: 1750  
THICKNESS RECEIVED: 1.778  
THICKNESS ORDERED: 1.750  
PO / BATCH NO.: 0337836/M38616  
DATE: SEP 27 2017  
MATERIAL: MyHG-H-R1.750  
QUANTITY RECEIVED: 3  
QUANTITY RECEIVED: 3  
SHEET SIZE ORDERED:  
SHEET SIZE RECEIVED:  
QUANTITY INSPECTED:  
QUANTITY REJECTED:  
N/A

RELEASED  
05-03-25

EG.  $\frac{7}{8}$ " ROUND BAR = M4140H-R0.875

PURCHASE MATERIAL: AISI 4140H ROUND BAR 8-89  
 PER AISI 4140 OR ASTM A304-02 / -A-434-BC /  
 -A193-03 - GRADE-B7 / -A29-03 / -A322-91 OR  
 UNS # - G41400  
 MINIMUM YIELD TENSILE STRENGTH = 100 ksi  
 MINIMUM ULTIMATE TENSILE STRENGTH = 66 ksi  
 WHERE D.DD = DIAMETER IN INCHES  
 PART NUMBER: M4140H-R D.DD DIA.

|         |             |                             |
|---------|-------------|-----------------------------|
| DESIGN  | DRAWN BY    | HAWKESBURY, ONTARIO, CANADA |
| CHECKED | APPROVED    | M4140H-R                    |
| DATE    | TIME        | 4140 ROUND BAR              |
| REV. A  | DRAWING NO. | SHEET 1 OF 1                |
| 111     | 05.02.21    | 05.02.21 NEW ISSUE          |

DART

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

|                              |                                   |
|------------------------------|-----------------------------------|
| QC 18 INSPECTION             | ENGINEERING SIGNOFF (if required) |
| INSPECTED BY:                | SIGNED OFF BY:                    |
| DATE:<br>SEP 27 2017<br>9-89 | DATE:<br>5/18                     |

|   |     |     |       |       |         |
|---|-----|-----|-------|-------|---------|
| CUT SAMPLE PIECE OF MATERIAL AND FORM A HARDNESS CHECK. |     |     |       |       |         |
| RECORD RESULTS BELOW                                    |     |     |       |       |         |
| TYPE OF MATERIAL  | HRC | HRB | DUR A | DUR D | WEBSTER |
|   |     |     |       |       |         |
| SIZE OF TEST SAMPLE                                     |     |     |       |       |         |
|   |     |     |       |       |         |
| HARDNESS / DUROMETER READING                            |     |     |       |       |         |
|   |     |     |       |       |         |

*testers located in the Quality Office*

| DESCRIPTION                                     | NCR                                   | Comments |
|---|---------------------------------------|----------|
| SURFACE DAMAGE                                  | <input checked="" type="checkbox"/> N |          |
| CORROSION                                       | <input checked="" type="checkbox"/> N |          |
| CORRECT FINISH                                  | <input checked="" type="checkbox"/> N |          |
| CORRECT GRAIN DIRECTION                         | <input checked="" type="checkbox"/> N |          |
| CORRECT MATERIAL PER DRAWING                    | <input checked="" type="checkbox"/> N |          |
| PHOTO REQUIRED                                  | <input checked="" type="checkbox"/> N |          |
| CORRECT MATERIAL IDENTIFICATION                 | <input checked="" type="checkbox"/> N |          |
| CORRECT M# ON THE MATERIAL                      | <input checked="" type="checkbox"/> N |          |
| DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF | <input checked="" type="checkbox"/> Y |          |
| DOES THIS MATERIAL REQUIRE AN EXTRUSION REPORT  | <input checked="" type="checkbox"/> Y |          |
| <i>HT# 136350</i>                               |                                       |          |

|                      |                    |                         |
|----------------------|--------------------|-------------------------|
| MATERIAL CERT REC'D: | yes                | DATE: SEP 27 2017       |
| THICKNESS RECEIVED:  | <i>3.250</i>       | QUANTITY RECEIVED:      |
| THICKNESS ORDERED:   | <i>3.250</i>       | QUANTITY ORDERED:       |
| PO / BATCH NO.:      | <i>M1018R2.250</i> | SHIPPING SIZE RECEIVED: |
| PO / BATCH NO.:      | <i>M1018R2.250</i> | SHIPPING SIZE ORDERED:  |

## MATERIAL RECEIPT INSPECTION FORM

# SPECIFICATION CONTROL DRAWING

D

8  
7  
6  
5  
4  
3  
2  
1

D

5  
DAS  
B-89

PURCHASE MATERIAL: AISI 1018-1025 ROUND BAR  
 SPECIFICATION: MIL-S-7097 OR ASTM A108  
 PART NUMBER: M1018-R<sub>D</sub> DDD WHERE D.DDD = DIAMETER IN INCHES

EG. 7/8" ROUND BAR = M1018-R0.875

TOLENCES:

PER ASTM A108 AS FOLLOWS:  
 SIZE TOLERANCE  
 UP TO 1.5" INCL. +0.000/-0.002  
 OVER 1.5" TO 2.5" INCL. +0.000/-0.003  
 OVER 2.5" TO 4.0" INCL. +0.000/-0.004  
 OVER 4.0" TO 6.0" INCL. +0.000/-0.005  
 OVER 6.0" TO 8.0" INCL. +0.000/-0.006

C

C

B

B

HAWKESBURY, ONTARIO, CANADA  
**DART AEROSPACE LTD**  
 2012-09-24  
*[Signature]*

| B          | REFORMAT, ADD ASTM A108, AND TOLERANCES |                             | CP           | 12.09.05 |
|------------|---|-----------------------------|--------------|----------|
| A          | NEW ISSUE                               | DS                          | BY           | 01.06.12 |
| REV.       | DESCRIPTION                             |                             | DATE         |          |
| DESIGN     | DS                                      |                             |              |          |
| DRAWN      | CP                                      | HAWKESBURY, ONTARIO, CANADA |              |          |
| CHECKED    | <i>AP</i>                               | DRAWING NO.<br>M1018-R      | REV. B       |          |
| MFG. APPR. | <i>AP</i>                               | TITLE                       | SHEET 1 OF 1 |          |
| APPROVED   | <i>AP</i>                               | 1018-1025 ROUND BAR         | SCALE        | NTS      |
| DE APPR.   | <i>AP</i>                               | DATE                        | DATE         | 12.09.05 |

COPYRIGHT © 2001 BY DART AEROSPACE LTD  
 This document is private and confidential and is supplied to express drawings that is  
 not to be copied or reproduced or disclosed to any other person without  
 written permission from Dart Aerospace Ltd.

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

|                                   |               |                  |
|-----------------------------------|---------------|------------------|
| INSPECTED BY:                     | SIGNS OFF BY: | DATE:            |
| DAS 5                             |               | SEP 27 2017 9-89 |
| ENGINEERING SIGNOFF (if required) |               |                  |
| OC 18 INSPECTION                  |               |                  |

|  |                              |     |       |         |
|--|------------------------------|-----|-------|---------|
| CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. |                              |     |       |         |
| RECORD RESULTS BELOW                                       |                              |     |       |         |
| TYPE OF MATERIAL   | HRC                          | HRB | DUR A | DUR D   |
|  |                              |     |       | WEBSTER |
| SIZE OF TEST SAMPLE  |                              |     |       |         |
|  | HARDNESS / DUROMETER READING |     |       |         |
| TESTERS LOCATED IN THE QUALITY OFFICE                      |                              |     |       |         |

| DESCRIPTION                                     | NCR | Check (Y/N) | COMMENTS |
|---|-----|-------------|----------|
| SURFACE DAMAGE                                  | Y   | N           |          |
| CORRECT FINISH                                  | Y   | N           |          |
| CORROSION                                       | Y   | N           |          |
| CORRECT GRAIN DIRECTION                         | Y   | N           |          |
| CORRECT MATERIAL PER M-DRAWING                  | Y   | N           |          |
| CORRECT THICKNESS                               | Y   | N           |          |
| PHOTO REQUIRED                                  | Y   | N           |          |
| CORRECT MATERIAL IDENTIFICATION                 | Y   | N           |          |
| CORRECT M# ON THE MATERIAL                      | Y   | N           |          |
| DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF | Y   | N           |          |
| DOES THIS REQUIRE AN EXTRUSION REPORT           | Y   | N           |          |
| AFTER 9373CY-55                                 |     |             |          |

|                      |                |                      |             |
|----------------------|----------------|----------------------|-------------|
| MATERIAL CERT REC'D: | 4037836-MB8GL6 | DATE:                | SEP 27 2017 |
| THICKNESS RECEIVED:  | 0.194          | QUANTITY RECEIVED:   | 5X10        |
| THICKNESS ORDERED:   | 0.182          | QUANTITY INSPECTED:  | 50 SHEETS   |
| SHEET SIZE ORDERED:  | 5X10           | QUANTITY REJECTED:   | 0           |
| SHEET SIZE RECEIVED: | 5X10           | SHEET SIZE RECEIVED: | 5X10        |

## MATERIAL RECEIPT INSPECTION FORM



Note:

PO Introductions: QUILATION: SOU0037382

Page Number 1 of 3

PURCHASE ORDER # PO37834  
Purchase Order Date 9/22/2017  
Purchase Order ID PO37834  
Purchase Order Date 9/22/2017  
PO Print Date 9/22/2017

Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel.: 613 632 9577  
Fax: 613 632 1053



Note:

PO Instructions: QUOTATION: SOU0057382

Line Total: \$222.68

*80145-23*

\$17.16

Line Total: \$17.16

*80145-23*

\$360.00

Line Total:

\$360.00

*80145-23*

Contact Name

Vendor Phone

*800 667 4248*

Buyer

Ship To Contact

Ship To Phone

Ship Via:

Ship Accr:

MT-HRP0-S6GA

ASTM A36 OR ASTM A1011

MATERIAL: HOT ROLLED PICKLE &amp; OILED STEEL SHEET AS PER

MIL-S-7097 OR ASTM A108

10/6/2017

Yes

Hot Rolled Pickled &amp;

Oiled Steel Sheet 6GA

10/6/2017

Yes

Hot Rolled Steel Sheet 6GA

10/6/2017

Hot Rolled Steel Sheet 6GA  
10/6/2017  
Yes  
MT-HRS-P-0.375  
Hot Rolled Steel Plate  
0.375" (44W)  
10/6/2017  
\$222.68MATL: HOT ROLLED STEEL PLATE AS PER  
ASTM A36/ASTM A1011 /44W OR ASTM A1018MATERIAL: AISI 1018-1025 ROUND BAR AS PER  
MIL-S-7097 OR ASTM A1084 M1018R2.250  
M1018R2.250  
10/6/2017  
\$17.16  
1.00  
F  
10/6/2017  
\$17.16  
10/6/2017  
\$360.00  
5 MT-HRP0-S6GA  
MT-HRP0-S6GA  
10/6/2017  
\$360.00  
30.00  
SF  
10/6/2017  
\$7.20  
30.00  
FOB  
Customer Tax #  
Net 30  
10127-2607  
Customer POID  
Chantal Lavioie  
Buyer  
800 667 4248  
Contact Name  
Vendor Phone  
Ship To Contact  
Ship To Phone  
Ship Via:  
Ship Accr:

Order From: DART AEROSPACE INC.  
 935 BOUL. DU HAVRE  
 HAWKESBURY, ON K6A 1K7  
 1270 ABERDEEN  
 ILLFIELD, QC J6S 5L1  
 CANADA  
 Fax: 613 632 1053  
 Tel: 613 632 9577  
 Purchase Order Date 9/22/2017  
 PO Print Date 9/22/2017  
 PURCHASE ORDER ID PO37836  
 Dart Aerospace Ltd.  
 1270 Aberdeen Street  
 Hawkesbury, ON K6A 1K7  
 PURCHASE ORDER ID PO37836  
 PURCHASE ORDER ID PO37836  
*DART AEROSPACE*

Note: Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dart aerospace.com for further explanation.

PO Instructions: QUOTATION: SUU0057382

CF

\$899.84

PO Total:

\$0.00

Line Total:

|                 |               |              |               |                |        |     |          |     |                     |      |      |           |    |                     |  |                              |  |  |                                |                                    |                                     |
|-----------------|---------------|--------------|---------------|----------------|--------|-----|----------|-----|---------------------|------|------|-----------|----|---------------------|--|------------------------------|--|--|--------------------------------|------------------------------------|-------------------------------------|
| Contact Name    | Vendor Phone  | 800 667 4248 | Customer POID | Customer Tax # | Net 30 | CAD | Currenty | TOB | FC - (Free Carrier) | 1.00 | 1.00 | 10/6/2017 | No | A005 Right of entry | A012 chemical and physical test report | A016 personnel qualification | A017 raw material identification (as applicable) | A020 certification of material conformance | A041 quality management system | A042 data notification by supplier | A043 retention of quality documents |
| Ship To Contact | Ship To Phone |              |               |                |        |     |          |     |                     |      |      |           |    |                     |  |                              |  |  |                                |                                    |                                     |

ACIER OULETTE INC.  
935 BOUL. DU HAVRE  
1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA  
VC-CAM002  
Ship To : DART AEROSPACE LTD

Order From:

Page Number 3 of 3

Purchase Order Date 9/22/2017  
Fax: 613 632 1053

Purchase Order ID PO37836

PURCHASE ORDER

|                               |                         |                               |                   |                   |
|-------------------------------|-------------------------|-------------------------------|-------------------|-------------------|
| Dart Aerospace Ltd.           | 1270 Aberdeen Street    | Hawkesbury, ON K6A 1K7        | Tel: 613 632 9577 | Fax: 613 632 1053 |
| Purchase Order Date 9/22/2017 | PO Print Date 9/22/2017 | Purchase Order Date 9/22/2017 | Fax: 613 632 1053 |                   |
| <b>DART</b> AEROSPACE         |                         |                               |                   |                   |



Thx

Kim, here is the mat'l left to enter into the system for the C10 Cage.  
Chantal, once that's entered everything should be in the system for the Cage. I will find out how many we need to make  
before you order should only be one.

From: Chantal Lavioie  
Sent: Wednesday, September 13, 2017 9:49 AM  
To: Regis Quenneville  
Cc: Kim Johnston; Chantal Lavioie  
Subject: C10 CAGE MAT'L

Chantal Lavioie

MT-HRPO-S-24.000X24.000X6GA (1)  
MT-A513-T-1.000X0.120  
MT-HRSP-24.000X24.000X0.375  
MT-A513-T-1.000X0.120 (24)  
MT-HRPO-S-24.000X24.000X6GA (1)  
M1018S.312 (4,x4)  
M1018R2.250 (1)  
MT-A513-T-1.000X0.120  
MT-HRSP-24.000X24.000X0.375  
MT-A513-T-1.000X0.120 (omitt)  
MT-A513-T-1.000X0.120 (omitt)  
6381K193 (x1)  
M4140H-R1.750 (1)  
91257A857 (x1)  
E3TZ-4730-A (x1)  
90576A118 (x1)  
91074A131 (x1)  
98338A290 (x1)  
AN8-37A (x2)  
AN960-816L (x4)  
MS21044N8 (x2)

Cage ass'y :  
Here is the complete list of mat'l and hardware we need to order to make one C10